REMARKS

Claims 5-18 are pending in this application, of which claims 5 and 10-16 have been amended, and claims 17 and 18 have been added.

(1) Claims 10-16 were rejected under 35USC §112, first paragraph as failing to comply with the written description requirement.

Claims 10-14 have been amended. The claimed chemiluminescent components comprising the first component and the second component separated from the first component are described in the specification. In the Examples, Sample 1 is separated from the oxidizing liquid before inducing the luminescent. Page 4 of the specification. Reconsideration of the rejection is respectfully requested.

(2) Claims 5-9 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite.

Claim 5 has been amended to recite that acetyl tributyl citrate as a major organic solvent. For example, Sample 2 described at page 4, lines 10-11 includes acetyl tributyl citrate (ATBC) alone as an organic solvent. In addition, Table 3 at page 6 shows that Samples A-E including benzyl benzoate at 0%-40% in acetyl tributyl citrate (ATBC) had excellent luminescent intensity compared with Samples F-K. One skilled in the art recognizes that the present invention uses

acetyl tributyl citrate (ATBC) as a major organic solvent. The limitation of "major organic solvent" covers, e.g., chemiluminescent composition including acety tributyl citrate at an amount from 100 volume % to 60 volume % in the organic solvent.

(3) The rejection under 35 U.S.C. §102(e)/102(a)

Claims 6-14 were rejected under 35 U.S.C. §102(e) as being anticipated by Cranor (U.S. Patent No. 7,052,631). Claims 6-14 were also rejected under 35 U.S.C. §102(a) as being anticipated by Cranor (U.S. Publication No. 2003/0102467).

The disclosure by Cranor (U.S. Patent No. 7,052,631) is the same as Cranor (U.S. Publication No. 2003/0102467). The application number is 10/010,075.

Claims 6 and 10 have been amended to recite including the acetyl tributyl citrate "as a major organic solvent." Cranor discloses 50/50 mixture of propylene glycol dibenzoate and acetyltributyl citrate. According to Merriam-Webster Dictionary, the term "major" means "greater in number, extent or importance." In Cranor, acetyltributyl citrate is not "greater" than propylene glycol dibenzoate, so it not a major organic solvent. Thus, the rejection under 35 U.S.C. §102(e)/102(a) is not supported by Cranor. Reconsideration of the rejection is respectfully requested.

(4) Claims 5-16 were rejected under 35 U.S.C. §103(a) as being unpatentable over Cranor (U.S. Patent No. 7,052,631 or U.S. Publication No. 2003/0102467) in view of Zweig et al. (U.S. Patent No. 3,729,426), Roberts et al. (U.S. Patent No. 3,701,738), and/or Crigg (U.S. Patent No. 3,560,395).

Cranor discloses 50/50 mixture of propylene glycol dibenzoate and acetyltributyl citrate. Cranor does not teach the superiority of acetyltributyl citrate. As described at Table 3 of the specification, the luminescent intensity became larger as the ATBC contents increased. In particular, the intensity values after 2 minutes of Samples A, B, C, D and E (ATBC/benzyl benzoate = 100/0, 90/10, 80/20, 70/30 and 60/40, respectively) were above 31000 mcd/m^2, whereas those of Samples F-K were less than 30000mcd/m^2. Cranor's "50/50 mixture of propylene glycol dibenzoate and acetyltributyl citrate" substantially corresponds to Sample F in Table 3 because acetyltributyl citrate is included at 50%. Cranor does not teach that acetyltributyl citrate "as a major organic solvent" as recited in claims 1 and 10. Also, Cranor does not teach the limitations of claims 7, 8, 12 and 13.

As to claims 17 and 18, Cranor does not teach including acetyl tributyl citrate at an amount of 90 volume % or more in the organic solvent of the chemiluminescent composition. As described at Table 3 in the specification, the luminescent intensity values of Samples B are substantially the same as those of Sample A. The luminescent intensity of Samples A and B was superior to those of Samples C-K.

Cranor teaches "biodegradable" (col. 1, lines 8), but does not teach improving the luminescent intensity by acetyltributyl citrate. In particular, one skilled in the art does not recognize that increase of the content of acetyltributyl citrate improves the luminescent intensity and decay of the intensity. Thus, the result found in the present invention is unexpected.

If the reference touches, overlaps or is within the claimed range, but if no specific examples falling within the claimed range are disclosed, the unexpected results render the claimed invention unobvious. MPEP2131.03. In this case, Cranor does not disclose specific example falling with the amount recited in claims 5, 7, 8, 10, 12, 13, 17 and 18. Also, the specific amount recited in the claims shows unexpected result as explained above. Thus, in accordance with MPEP2131.03, the rejection should be withdrawn. Reconsideration of the rejection is respectfully requested.

(5) Claims 5-16 were rejected under 35 U.S.C. §103(a) as being unpatentable over Omniglow Corporation (WO 94/19421) in view of Zweig et al. (U.S. Patent No. 3,729,426), Roberts et al. (U.S. Patent No. 3,701,738), and/or Crigg (U.S. Patent No. 3,560,395).

The Applicant herewith submits a declaration under 37 CFR §1.132.

(i) In the declaration, the inventor prepared Samples 1-5, that is, chemiluminescent compositions including dibutyl phthalate (DBP), acetyltributyl citrate (ATBC), acetyltriethyl citrate (ATEC), tributyl citrate (TBC) and triethyl citrate (TEC), respectively.

(ii) Omniglow discloses acetyl trialkyl citrates and trialkyl citrates such as acetyl triethyl citrate and triethyl citrate used in an activator composition including a peroxide. Page 3, lines 13-23 of Omniglow. The specific citrates disclosed by Omniglow are triethyl citrate (TEC), acetyltriethyl citrates (ATEC) and acetyltributyl citrate (ATBC) in an activator composition including a peroxide (Table 1).

(iii) As shown in Tables 1-3 in the declaration, the luminescent intensity of Sample 2 was substantially the same as Sample 1, and superior to Samples 3-5. Specifically, Table 1 shows that the decay of the luminescent intensity of Sample 2 was almost identical to Sample 1, whereas the decay of the luminescent intensity of Samples 3-5 was significantly inferior to Sample 1.

Table 2 shows that the decay of the luminescent intensity of Sample 2 stored at 60℃ (Test 2) was substantially the same as Sample 2 stored at 23℃ (Test 1), whereas the decay of the luminescent intensity of Samples 3-5 stored at 60℃ (Test 2) was significantly inferior to Samples 3-5 stored at 23℃ (Test 1).

Table 3 shows that the decay of the luminescent intensity of Sample 2 stored at 60℃ (Test 2) was substantially the same as Sample 1 stored at 60℃ (Test 2), whereas the decay of the luminescent intensity of Samples 3-5 stored at 60℃ (Test 2) was significantly inferior to Sample 1 stored at 60℃ (Test 2).

As declared by the Applicant, the storage at 60℃ is an "accelerated aging." Page 4 of the declaration.

Omniglow's Samples 1 and 3 included triethyl citrate and acetyltriethyl citrate, having "good light performance initially and after accelerated aging." However, Omniglow's Samples 7, included acetyltributyl citrate, having "good light performance initially but poor performance after accelerated aging." See Table 1 of Omniglow. Omniglow further teaches that [t]he most preferred solvents are...acetyl triethyl citreate and triethyl citrate. See page 3, lines 20-23 of Omniglow. Clearly, Table 1 of Omniglow suggests that triethyl citrate and acetyltriethyl citrate are preferable but acetyltributyl citrate is not preferable because it is poor after "accelerated aging."

Please also note that Omniglow only teaches using the citrates in an activator composition including a peroxide, and does not teach or suggest using the citrates in a fluorescent composition as recited in the claims.

On the other hand, the declaration submitted herewith shows that the fluorescent composition including acetyltributyl citrate (Sample 2) was superior to that including acetyltriethyl citrates (Samples 3) or triethyl citrate (Sample 5). The results clearly show that effects by acetyltributyl citrate, acetyltriethyl citrates and triethyl citrate are different between using in a chemiluminescent composition (i.e., a first component in claim 10) and using in an activator composition (i.e., a second component in claim 10).

In addition, Omniglow teaches that acetyltributyl citrate is not preferred even in using an activator composition. Thus, the superiority of acetyltributyl citrate over acetyltriethyl citrate and triethyl citrate used in a chemiluminescent composition is unexpected.

If the reference touches, overlaps or is within the claimed range, but if no specific examples falling within the claimed range are disclosed, the unexpected results render the claimed invention unobvious. MPEP2131.03. In this case, Omniglow discloses acetyltributyl citrate, acetyltriethyl citrates and triethyl citrate used in an activator composition. However, Omniglow does not disclose specific chemiluminescent composition using acetyltributyl citrate. As explained above, chemiluminescent composition using acetyltributyl citrate shows unexpected results over that using acetyltriethyl citrate or triethyl citrate. Thus, in accordance with MPEP2131.03, the rejection should be withdrawn. Reconsideration of the rejection is respectfully requested.

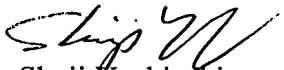
(6) In view of the aforementioned amendments and accompanying remarks, Applicant submits that that the claims, as herein amended, are in condition for allowance. Applicant requests such action at an early date.

If the Examiner believes that this application is not now in condition for allowance, the Examiner is requested to contact Applicant's undersigned representative at the telephone number indicated below to arrange for an interview to expedite the disposition of this case.

If this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. The fees for such an extension or any other fees that may be due with respect to this paper may be charged to Deposit Account No. 50-2866.

Respectfully submitted,

WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP



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